

## **REMARKS**

This application has been reviewed in light of the Office Action mailed June 20, 2006. Reconsideration of this application in view of the below remarks is respectfully requested. Claims 1, 2, 5, 7, 11, 13, 14, 17, 19, 23, 25, 31, 35, 55, 60, 61, 72 and 74 are pending in the application.

Initially, the Examiner has indicated that claims 11, 13, 14, 17, 19, 23, 25, 31, 35 and 74 have allowable subject matter. In addition, the Examiner has objected to claim 68 as being dependent upon a rejected base claim, but indicated that the claim would be allowable if rewritten in independent form including all of the limitations of any intervening claims.

Also, the Examiner appears to have erroneously listed Claim 11 as withdrawn, however, this claim remains elected for further prosecution. Based on the Office Action dated of December 28, 2005, it is believed that Claim 11 should be considered as objected to for being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of any intervening claims.

### **I. Rejection of Claims 1, 55 and 72 Under 35 U.S.C. § 102(e)**

Claims 1, 55 and 72 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,383,916 issued to Lin.

Lin discloses a circuit substrate arrangement, which allows arbitrary rerouting of input/output leads 101 – 105 of a ball grid array (BGA) device 100 using a BGA substrate 130. (See: Col. 8, lines 12 – 24). However, the Lin-disclosed assembly differs from Applicants' claimed invention in several respects.

Firstly, Lin fails to disclose two device terminals for every one input/output signal, as recited in Claim 1, and similarly in Claims 55 and 72. In fact, there is little mention in Lin

regarding semiconductor devices or their particular pin configurations. Rather Lin is concerned only with a way of interconnecting closely positioned integrated circuit (IC) devices.

Second, Lin fails to disclose a laminated substrate having at least two wiring layers, including a signal wiring layer and a power-supply or ground wiring layer, as recited in Claim 1. The assembly illustrated in FIG. 10 does have a top layer and a bottom layer, however the terminals 101 – 105 on the top layer are connected to the terminals 121 – 125 on the bottom layer. Consequently, it is clear that there is no differentiation between the two layers regarding the type of wiring supported by each layer. In other words, if the top terminals were signal wiring, then the bottom terminals 121 – 125 would be signal wiring as well since both sets of terminals are interconnected.

It is well-settled by the Courts that “[A]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company, et al., 730 F.2d 1452, 221 USPQ 481 (Fed. Cir., 1984).

Therefore, as demonstrated above, because Lin does not disclose each and every element recited in the present claims, Applicant respectfully submits that the rejection has been traversed with respect to Claims 1, 55 and 72. Accordingly, Applicants respectfully request withdrawal of the rejection with respect to Claims 1, 55 and 72 under 35 U.S.C. § 102(e).

## **II. Rejection of Claims 2 and 61 Under 35 U.S.C. § 103(a)**

Claims 2 and 61 are rejected under 35 U.S.C. § 103(a) over Lin in view of U.S. Patent No. 6,137,164 issued to Yew et al.

As shown above, Lin fails to disclose or suggest two device terminals for every one input/output signal, and a laminated substrate having at least two wiring layers, including a signal

wiring layer and a power-supply or ground wiring layer, as recited in Claim 1 and similarly in Claim 61. Claim 2 depends from independent Claim 1, and thus includes all the limitations recited in that independent claim.

Yew discloses an assembly for stacking IC devices. However, Yew et al. fails to overcome the deficiencies identified in Lin. Therefore, Lin and Yew et al., taken alone or in any proper combination, fail to disclose or suggest the present invention as recited in Claims 2 and 61. Accordingly, Applicants respectfully request withdrawal of the rejection with respect to Claims 2 and 61 under 35 U.S.C. § 103(a) over Lin in view of Yew et al.

### **III. Rejection of Claim 5 Under 35 U.S.C. § 103(a)**

Claim 5 is rejected under 35 U.S.C. § 103(a) over Yew et al. in view of U.S. Patent No. 6,630,628 issued to Devnan et al.

Claim 5 depends from independent Claim 1, and thus includes all the limitations recited in that independent claim. Therefore, Yew et al. and Devnani et al., taken alone or in any proper combination, fail disclose or suggest the present invention as recited in Claims 5. Accordingly, Applicants respectfully request withdrawal of the rejection with respect to Claim 5 under 35 U.S.C. § 103(a) over Yew et al. in view of Devnan et al.

### **IV. Rejection of Claims 7 and 60 Under 35 U.S.C. § 103(a)**

Claims 7 and 60 are rejected under 35 U.S.C. § 103(a) over Lin in view of U.S. Patent No. 6,184,477 issued to Tanahashi.

Claim 7 depends from independent Claim 1, and thus includes all the limitations recited in that independent claim. Claim 60 recites similar limitations as Claim 1 with respect to two device terminals for every one input/output signal, and a laminated substrate having at least two wiring layers, including a signal wiring layer and a power-supply or ground wiring layer.


Therefore, Lin and Tanahashi, taken alone or in any proper combination, fail disclose or suggest the present invention as recited in Claims 7. Accordingly, Applicants respectfully request withdrawal of the rejection with respect to Claims 7 and 60 under 35 U.S.C. § 103(a) over Lin in view of Tanahashi.

## CONCLUSIONS

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1, 2, 5, 7, 11, 13, 14, 17, 19, 23, 25, 31, 35, 55, 60, 61, 72 and 74 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Applicant's undersigned attorney at the number indicated below.

Respectfully submitted,



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